Dear members of the legislature,

I am writing to give testimony regarding evaluation procedures based on the research of Robert Marzano, implemented recently at Danbury High School and other schools in Connecticut. I am a teacher with over 25 years of experience in teaching, curriculum design and implementation, and school administration. I hold a doctorate in education, and have reviewed educational theory and practice extensively in my doctoral work. I am an adjunct instructor of mathematics teaching methods at Western Connecticut State University.

As experienced teachers, we have often encountered new systems and are accustomed to implementing new teaching methods that are brought forward by researchers, even if they constitute work and hardship to implement, as long as it is clear that the methods are beneficial to teaching and students. Unfortunately, with regard to the Marzano research, this does not seem to be the case.

Marzano's research fails on axiological and methodological grounds, and the implementation of this research fails basic measures of efficiency. Axiologically, Marzano's research fails to address the complexities of education because he takes standardized pencil-and-paper test scores as the only measure of educational effectiveness. As an example of how this limitation fails the needs of children, Marzano, in The Art and Science of Teaching, explicitly discounts the work of Howard Gardner in multiple intelligences, set forth in his seminal 1983 work, Frames of Mind: The Theory of Multiple Intelligences. Gardner's work is solidly grounded in practical research and modern neuroscience, but Marzano discounts this work because it fails to show an impact on paper-and-pencil tests. Of course, since this type of test only measures performance of a single mode of intelligence, we would not expect it to properly measure Gardner's theory. In short, Marzano throws out what is arguable the best neuroscientific research done in education in the twentieth century because he fails to use proper measures to detect its effects. The resulting damage to educational practice is substantial, as teachers are explicitly instructed to disregard multiple teaching and learning modalities for their students.

Marzano fails on methodological grounds because the overwhelming majority of his cited research does not include double-blind testing. That is, both researchers and participants are aware when they are in an experiment group for much of this research. The result of this is that data are heavily influenced -- for all practical purposes, completely invalidated -- by participant effect. How this works in practice is that when a method is tried in the classroom, the teacher, who is conducting the experiment and monitoring the data, is not only aware of a desired outcome, but has very strong incentive to produce that outcome; often the teachers job depends on showing improvement with a given modality. Likewise, the student participants are aware that they are expected to demonstrate improvement, and given strong incentive to demonstrate that outcome; often their grade depends upon it. Either one of these biases -- the participant bias, or the researcher bias -- would be sufficient to invalidate data in any scientific experiment because of its tendency to show false positive results. Unfortunately, the standard of publication in educational research lags behind that, for example, of medical trials, which require double blind experiments.

Finally, Marzano fails on the basis of basic standards of efficiency in implementation. The most egregious failure in this regard is Marzano's pervasive use of idiosyncratic jargon that serves to obscure the content and burden the practitioner with an excessive task of memorization: The numbering system, the use of
obscure acronyms such as SLO and IAGD, where simple English words (such as "objective" and "measure") exist, are but a few examples of this burdensome system. All of this is monitored through a software system that is overly complex, unclear, poorly organized, and prone to failure.

If these are the drawbacks to the Marzano system, it is difficult to identify any advantages conferred by it. Those of Marzano's conclusions that are not overtly false (such as the rejection of Gardner) are simple commonplaces (for example, Marzano lists "using homework" as an effective strategy -- which has been known, literally, for centuries). There is an unfortunate adage that applies to Marzano: It contains many new and correct things, but unfortunately, the things that are correct are not new, and the things that are new are not correct. Therefore, any benefit of the Marzano system would be more easily achieved by adopting other methods, such as those of Howard Gardner or Ted Sizer, and appealing to well-understood and valuable educational work such as that of Bloom and Piaget.
Indeed, as a teacher, I found the previous system of evaluation, in which an administrator of experience and insight observed my classroom, made notes regarding district expectation and good educational practice, then discussed that observation with me in face-to-face dialog, to be infinitely more valuable than the ponderous, jargon-laden system of Marzano, which brings nothing new to the table, also happens to be rife with error.

In summation, I strongly urge the members of this body to reconsider the implementation of the Marzano method, As teachers, we understand that parents, representatives, and school officials always want what is best for students, as, of course, do we. And we are willing to work hard to achieve that best potential. But it appears that the adoption of Marzano does not serve that purpose, and instead only produces a catastrophically negative impact on school climate.

I thank the members of this body for their time and consideration.

Dane Reese, Ph.D.
Faculty, Math Department,
Danbury High School
Danbury, CT.